

### **REMARKS/ARGUMENTS**

Claims 22, 23, 25, and 29-32 are currently pending in the present application. Claims 1-21, 24, and 26-28 have been canceled without prejudice or disclaimer. Claims 22 and 23 have been amended. Claims 30-32 have been added.

Claim 22 has been amended to include the porosity of claim 24. Claim 23 has been amended for a minor editorial purpose.

The amendments and new claim are supported by the claims and specification, as originally filed. No new matter has been added.

Applicant wishes to thank the Examiner for withdrawing the objection to the Oath/Declaration.

Regarding the Office's objection to claim 29 as a substantial duplicate of claim 9, Applicants note that claims 9 and 29 were separately dependent from different independent claims. However, claim 9 has been cancelled in the present amendment.

Reconsideration of the application is respectfully requested in view of the following remarks.

#### **Rejection under 35 U.S.C. § 102(e)**

The rejection of claims 1-6, 8-10, 22-23, 25 and 29 are rejected under 35 U.S.C. § 102(e) as anticipated by Hunter et al. (U.S. Patent No. 6,447,550) is respectfully traversed and rendered moot.

In particular, as indicated above, claim 22 has been combined with claim 24. As appreciated by the Office, Hunter et al. does not describe the highly porous oxide layer described in canceled claim 24. Therefore, withdrawal of the rejection is requested.

Hunter et al. is discussed in detail below.

#### **Rejection under 35 U.S.C. § 103(a)**

The rejection of claim 24 under 35 U.S.C. § 103(a) as obvious over Hunter et al., and the rejection of claim 7 as obvious over Hunter et al in view of Larsson et al. (U.S. Patent No. 6,689,170) are respectfully traversed. As indicated above, claim 7 has been cancelled.

Regarding claim 24, as noted above, the claim has been combined with claim 22.

As appreciated by the Office, Hunter et al. does not expressly describe an implant in which the oxide layer is highly porous, with  $1 \times 10^7$  -  $1 \times 10^{10}$  pores/cm<sup>2</sup>, but the Office asserts that the feature would be an obvious extension of the prior art.

However, Applicant points out that Hunter et al. indicates that the thickness of its *dense* oxide layer, and not porosity, is the ideal feature of the coating layer. In particular, the reference recites that

[the processes of the disclosure] ideally provide a thin, hard, dense, blue-black or black, low-friction wear-resistant uniformly thick zirconium oxide film or coating of thicknesses typically on the order of several microns on the surface of the prosthesis substrate.

(Col. 6, lines 4-10).

The reference further indicates that the oxidation coating layer is formed according to a specific oxidation time, since “[l]onger oxidation times and higher oxidation temperatures will increase this thickness, but may compromise coating integrity.” (Col. 7, lines 8-10).

No where is it suggested in the reference that the coating layer is processed according to a *high* porosity or that a specific porosity for the dense oxide coating is required for the strength or adhesion of the layer.

In fact, the reference appears to teach away from a highly porous coating, as noted below regarding the “high integrity” of the dense oxide coating layer. According to Hunter et al.,

[t]he formation of a uniformly thick oxide coating provides an oxide coating of variable and controlled thickness with especially high abrasion[,] resistance and reduced wear due to high integrity of the adhesion between the oxide layer and the underlying zirconium or zirconium alloy and the high integrity of the adhesion within the oxide layer. The term ‘high integrity’ denotes an oxide coating that is uniform in thickness with no visible cracks or pores when viewed in cross-section by optical microscopy.

(Col. 8, lines 3-12).

Therefore, claim 22 and the claims dependent thereon are clearly not obvious in view of Hunter et al., since the claimed porosity is not an obvious suggestion or extension of the reference. Accordingly, withdrawal of the rejection is requested.

**Rejection for Obviousness-Type Double Patenting**

The claims remain rejected on the ground of nonstatutory obviousness-type double patenting, as follows: 1) claims 1-6, 9 and 22 over claims 1-3, 5 and 8 of U.S. Patent No. 7,048,541; 2) claims 1-6, 8-10 and 22-25 over claims 1, 7-9 of co-pending U.S. Application No. 10/482,727; and 3) claims 1-6, 8-10 and 22-25 over claims 4-5, 7 and 10 of co-pending U.S. Application No. 10/482,737.

In view of the above amendments, Applicant requests that the rejection of claims 1-6, 9 and 22 over claims 1-3, 5 and 8 of U.S. Patent No. 7,048,541 be withdrawn. Applicant further requests that the Office hold the remaining rejections in abeyance until allowable subject matter is indicated.

Applicants believe no fees are due with this response. However, if any additional fees are due, please charge our Deposit Account No. 22-0185, under Order No. 21547-00286-US from which the undersigned is authorized to draw.

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Respectfully submitted,

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